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WRITTEN REPORT ON THE POSSIBLE RELEASE FROM THE FEMP PLANT 1 PAD

10-25-1991

DOE-FO/STATE EMERGENCY
DOE-173-92
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LETTER

Department of Energy
Fernald Environmental Management Project
P.O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 738-6357

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OCT 2 5 1991

DOE-173-92

State Emergency Response Commission
c/o Mr. Tim Hickin
1800 WaterMark Drive
P.O. Box 1049
Columbus, Ohio 43266-1049

Dear Mr. Hickin:

WRITTEN REPORT ON THE POSSIBLE RELEASE FROM THE FEMP PLANT 1 PAD

A notification was made to Ohio EPA on September 24, 1991, of a possible release of regulated materials from the Fernald Environmental Management Project (FEMP). Pursuant to Ohio Revised code (ORC) 3750.06(D) and the Code of Federal Regulations (40 CFR 355.40(b)), a written report is also required. The enclosed report has been prepared to meet these requirements.

If you have any questions, please call David Rast at (513) 738-6322.

Sincerely,

Sally Quade for

R. E. Tiller
Manager

FO:Rast

Enclosure: As Stated

cc w/o encl.:

E. D. Savage, WEMCO
AR Coordinator, WEMCO
K. A. Hayes, EM-424, GTN

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40 CFR 355.40(b) AND ORC 3750.06(D) RELEASE REPORT
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

[redacted]

A. BACKGROUND INFORMATION:

Efforts have been ongoing at the Fernald Environmental Management Project (FEMP) to characterize all waste materials for interim storage and/or disposal. As part of this program, sampling has been conducted on a number of materials stored in drums on the Plant 1 Pad at the FEMP. Analytical results for a waste stream of wet sump or filter cake, oil contaminated, concluded that this material has been determined to be a hazardous waste.

While overpacking and weighing the containers, weight discrepancies (both gains and losses) were noted from the weights recorded on the original containers. A total of eight containers of this material were reweighed and overpacked for storage. As a result of the reweighing, an unaccounted weight loss of 487 pounds was reported from the containers.

Information indicates that some of the containers have been in storage for just over seven years, and it can not be conclusively determined if a Reportable Quantity (RQ) release of a hazardous substance had occurred within any single 24 hour period. As a conservative approach, notifications were made on September 24, 1991, by the U.S. Department of Energy (DOE) pursuant to CERCLA, SARA, and Ohio Revised Code reporting requirements for the release of hazardous substances. The FEMP RCRA Contingency Plan for hazardous waste releases was not implemented since the potential release was historical in nature, and no imminent threat to human health or the environment was indicated.

B. REQUIRED INFORMATION:

Pursuant to 40 CFR 355.40(b) and ORC 3750.06(D), a written report on the release is required to be submitted within 30 days of the event. The following information is provided to meet these requirements.

Updated Information

1. Location of the potential release: The potential release was from eight containers stored on the Plant 1 Pad located in the northwest area of the FEMP site (Attachment 1a). The containers were stored in area K of the approximately 375,000 square foot storage pad as shown in Attachment 1b.

2. Chemical name and identity of any substance involved in the release and whether the substance is an extremely hazardous substance: No extremely hazardous substances have been identified in this material. The drums contain a RCRA regulated material waste stream which has been characterized as containing the hazardous waste constituents of Tetrachloroethene (D039) and Trichloroethene (D040) which have a Reportable Quantity of 100 and 10 pounds respectively. The uranium content in this waste stream averages 2.74% U. The isotopic content is 0.44% U-235 which has a Reportable Quantity of 400 pounds.

[redacted]

3. Estimate of the quantity of any hazardous substance released into the environment: A total of eight containers showed an unaccounted weight loss of 487 pounds. However, no spilled material was observed at the location where the drums had been previously stored.

   Based on laboratory data, calculations indicate a potential release of 297 pounds of Tetrachloroethene (D039) and 30 pounds of Trichloroethene (D040).

   Some uranium loss could also have occurred. The maximum uranium loss that could have occurred is estimated at 13.34 pounds based on a uniform loss of drum contents.

4. Time and duration of the release: Some of the drums have been stored on the Plant 1 Pad since 1984 and reweighing is usually conducted when the drums are overpacked. Therefore, the exact time and duration of any potential release cannot be determined, nor can it be determined if any RQ release had occurred in any single 24 hour period in the past.

5. Environmental media into which the substance was (potentially) released: The Plant 1 Pad drains to the FEMP storm sewer system. The storm sewer system normally discharges to Manhole 175 and then to the Great Miami River. The possibility exists that some released materials may have entered the FEMP storm sewer system and eventually been discharged to the Great Miami River. The storm sewer flows going to the Great Miami River are monitored for uranium on a daily basis; however, routine monitoring is not performed for RCRA hazardous waste constituents in the Great Miami River discharges.

   In addition to possible storm sewer discharges, any released materials could have been washed off the Plant 1 Pad into an adjacent field to the west of the pad. Sampling of this area has indicated some uranium contamination in the soil, however, the source of the contamination has not been determined at this time. Analysis of soil samples for total metals have indicated isolated low level concentrations of lead and barium (non-leaching); the source of the contamination has not been determined.

6. Known or anticipated acute or chronic health risks associated with the release: There are no known or anticipated health risks as a result of the potential release. The most probable individuals with the potential to be affected would have been Plant 1 Pad workers, who are regularly monitored through a bioassay program for internal contamination. No intakes associated with the materials discussed in this report have been noted.

7. Proper precautions to take as a result of the release: No special precautions or emergency response actions were taken as a result of the discovery of this potential release. All FEMP workers involved in the actual drum movement and overpacking operation were properly trained prior to the start of this operation.

8. Name and telephone number of the person or persons to be contacted for further information: Mr. David Rast, FO, (513) 738-6357

Information under 40 CFR 355.40(b) and ORC 3750.06(D)(1)-(5)

1. Actions taken to respond to and contain the release: The containers of this material were overpacked. Because no real time release of material was noted to occur, and no visible contamination was observed, no additional actions were taken to respond and contain the potential release. The Plant 1 Pad is identified as a RCRA storage unit.

2. Known or anticipated acute or chronic health risks associated with the release: There are no known or anticipated health risks as a result of the potential release.

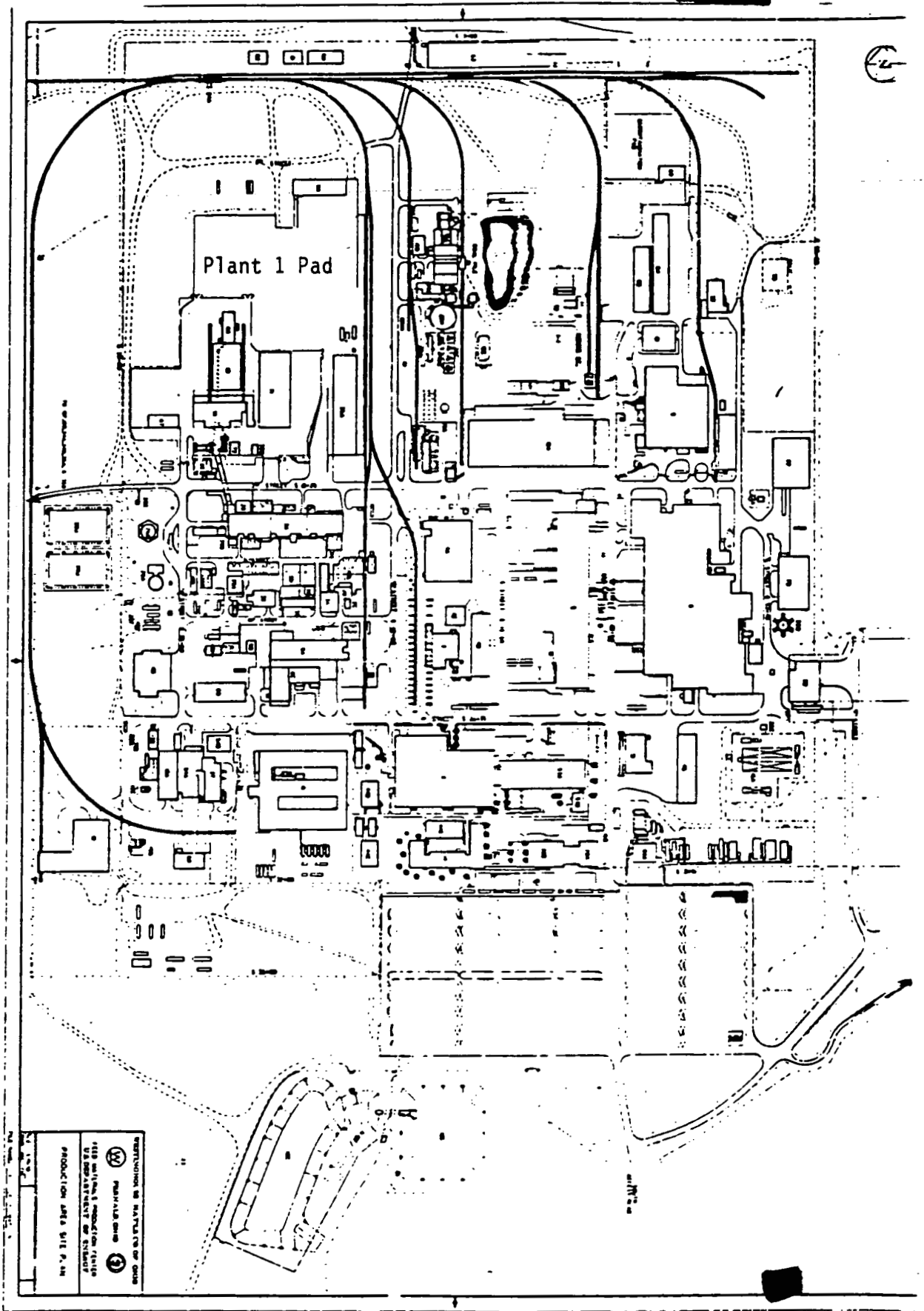
3. Advice regarding medical attention necessary for individuals exposed to the substance release: No medical advice is warranted as a result of the potential release.

4. Summary of all actions taken by the owner or operator to prevent a recurrence of the release: The defective containers involved were placed into overpack drums, and are being inspected daily until they are transported to an approved hazardous waste storage facility.

   Additional actions are underway at the FEMP to prevent releases from the remaining drums stored on the Plant 1 Pad. First, daily inspections of all the drums on the Plant 1 Pad are performed to identify drums that present an immediate risk of leakage. Second, a project is ongoing to overpack more than 30,000 of the approximately 45,000 additional drums from the Plant 1 Pad. Third, efforts are ongoing to move a portion of the drums from outdoor storage into existing FEMP process buildings. To date, some 21,500 drums have been moved to indoor storage. Fourth, contamination barriers constructed of impermeable herculite and PVC piping have been erected to contain potential releases from drums to the Plant 1 Pad. Fifth, efforts are ongoing to analyze and characterize all waste drums on the Plant 1 Pad. Finally, planning is in progress to process the non-hazardous low level radioactive wastes to allow off-site disposal.

ATTACHMENT 1a

[redacted]



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ATTACHMENT 1b

DO NOT SCALE
REDUCED DRAWING

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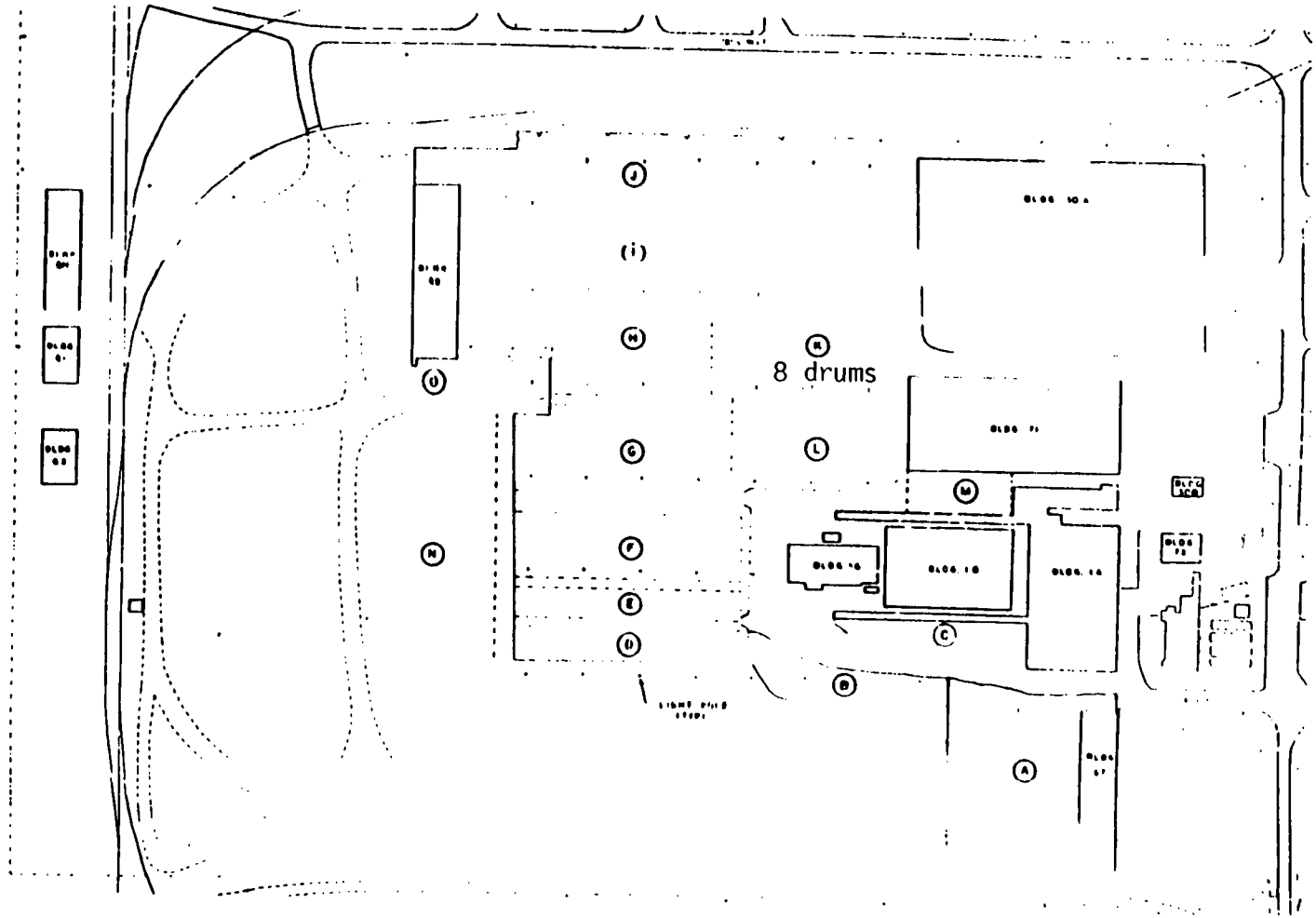

WESTINGHOUSE ELECTRIC CORP. OHIO
FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY

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